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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,696	07/09/2003	Narutoshi Sugita	CSC-021CN	1591
959	7590	07/17/2006	EXAMINER	
LAHIVE & COCKFIELD 28 STATE STREET BOSTON, MA 02109			YUAN, DAH WEI D	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 07/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/616,696

Applicant(s)

SUGITA ET AL.

Examiner

Dah-Wei D. Yuan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 1-4 and 9-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07092003, 10112005, 11032005, 1222005
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

SOLID POLYMER ELECTRLYTE FUEL CELL STACK

Examiner: Yuan S.N. 10/616,696 Art Unit: 1745 July 7, 2006

Election/Restrictions

1. Applicant's election with traverse of Group II, claims 5-8, in Paper filed June 21, 2006 is acknowledged. The traversal is on the ground(s) that no serious burden on the examiner to search the three distinct inventions. This is not found persuasive because regardless of search method, invention of different limitations will require different search strategies, and the times to consider the relevancy of collective references would increase proportionally as well.

The requirement is still deemed proper and is therefore made FINAL. Therefore, claims 1-4,9-32 are withdrawn from consideration.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 5,6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walsh (US 6,096,450).

Walsh teaches a fuel cell stack comprising a plurality of fuel cell units each including an anode electrode, a cathode electrode and a solid polymer membrane interposed between the anode electrode and the cathode electrode, wherein each of the fuel cell units has a

rectangular shape (see Figure 2), a fuel gas supply port and an oxygen-gas supply port are located at upper corners of the fuel cell units. Moreover, a plurality of fuel gas flow passages connecting the fuel gas supply port and the fuel gas discharge port while a plurality of oxygen flow passages connecting the oxygen gas supply port and the oxygen gas discharge port.

The disclosure of Walsh differs from Applicant's claims in that Walsh describe his flow passages being serpentine passages having more than two turns. However, it would have been an obvious matter of design choice to manufacture these components having two turns in the serpentine flow passages, since such a modification would have involved a mere change in the particular configuration of the component. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Also, it is the position of the examiner that the criticality on the numbers of turn in the flow passages does not provide patentable distinction.

4. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii et al. (US 6,048,633).

Fujii et al. teach a fuel cell stack comprising a plurality of fuel cell units each including an anode electrode, a cathode electrode and a solid polymer membrane interposed between the anode electrode and the cathode electrode, wherein each of the fuel cell units has a rectangular shape (see Figures 3-5), a fuel gas supply port and an oxygen-gas supply port are located at upper corners of the fuel cell units. Moreover, a plurality of fuel gas flow passages connecting the fuel gas supply port (36a) and the fuel gas discharge port (38a) while a plurality of oxygen

flow passages connecting the oxygen gas supply port (36c) and the oxygen gas discharge port (38c).

The disclosure of Fujii et al. differs from Applicant's claims in that Fujii et al. describe their flow passages being serpentine passages having more than two turns. However, it would have been an obvious matter of design choice to manufacture these components having two turns in the serpentine flow passages, since such a modification would have involved a mere change in the particular configuration of the component. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Also, it is the position of the examiner that the criticality on the numbers of turn in the flow passages does not provide patentable distinction.

With respect to claims 7,8, Fujii et al. teach the selected number of the plurality of first grooves merge into a selected number of the plurality of second grooves, wherein the number of second grooves is less than the number of the first grooves. See Figures 3 and 5.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dah-Wei D. Yuan whose telephone number is (571) 272-1295. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dah-Wei D. Yuan
July 7, 2006


DAH-WEI YUAN
PRIMARY EXAMINER